

TOSHIBA

STEREO RADIO CASSETTE RECORDER

RT-130S



SPECIFICATIONS

Cassette tape used:	C-30, C-60, C-90, C-120	Speakers:	120 mm (dia.) dynamic x 2 20 mm (dia.) piezo-electric type x 2
Tape speed:	4.8 cm/sec.	Jacks:	[MIC] jack x 2 Impedance 200 ohm to 2k ohm [REC/PB] jack x 1 [PHONES] jack x 1
Track system:	Four-track, two-channel stereophonic	Power supply:	AC 220 V-240 V, 50 Hz DC 9 V [SUM-1 (R20) "D" size x 6]
Recording system:	AC bias (55 kHz)	Power consumption:	13 W
Erasing system:	Multipolar magnet erasing	Dimensions (W x H x D):	440 x 235 x 104 mm
Frequency response:	60 Hz to 10 kHz	Weight:	2.6 kg (without batteries)
Receiving Frequency:	FM: 88 MHz to 108 MHz SW: 5.9 MHz to 15.4 MHz MW: 525 kHz to 1605 kHz LW: 145 kHz to 270 kHz		
Intermediate frequency:	FM: 10.7 MHz LW, MW, SW: 460 kHz		
Antenna:	FM, SW: telescopic antenna LW, MW: ferrite-core antenna		

Specifications are subject to change without notice.

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1. OPERATING CONTROLS

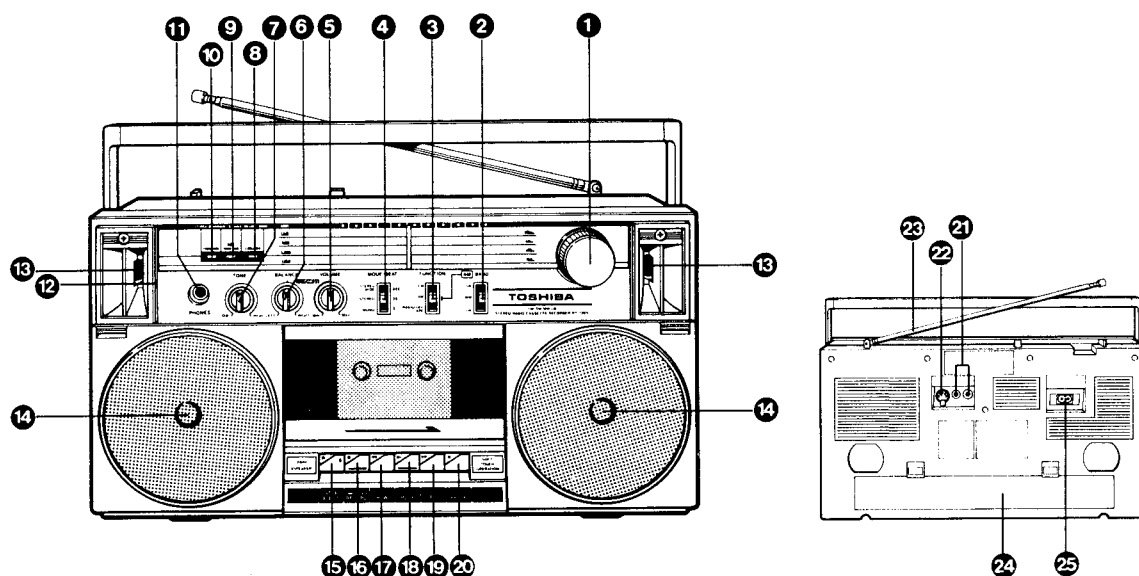
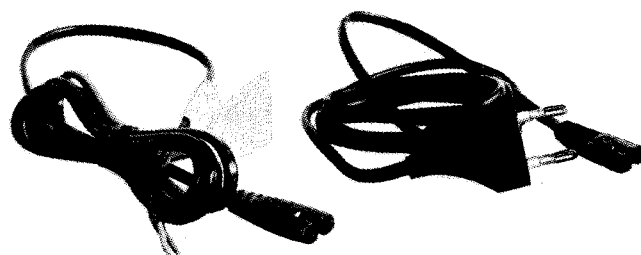


Figure 1.

- | | |
|--|---|
| ① Tuning Knob | ⑫ Built-in Microphones |
| ② [AM BAND] Selector | ⑬ Tweeters (Speakers for high-pitched sound) |
| ③ [FUNCTION] Selector | ⑭ Woofers (Speakers for low to mid-range sound) |
| Note: In the RADIO OFF/TAPE position the mains power will still be supplied. Therefore, when not in use unplug the cord from the socket. | |
| ④ [MODE/BEAT] Selector | ⑮ [STOP/EJECT] Button |
| ⑤ [VOLUME] Control | ⑯ [ONE TOUCH RECORD] Button |
| ⑥ [BALANCE] Control | ⑰ [REW] Button |
| ⑦ [TONE] Control | ⑱ [PLAY] Button |
| ⑧ [TUNING] Indicator | ⑲ [FF] Button |
| ⑨ [FM STEREO] Indicator | ⑳ [PAUSE] Button |
| ⑩ [BATTERY] Indicator | ㉑ [MIC] Jacks |
| ⑪ [PHONES] Jack | ㉒ [REC/PB] Jack |
| | ㉓ Telescopic Antenna |
| | ㉔ Batteries Compartment |
| | ㉕ [AC POWER] Socket |

TOSHIBA	
STEREO RADIO CASSETTE RECORDER	
MODEL NO. RT-130S	
FREQ. RANGE	FM 88~108MHz SW 5.9~15.4MHz MW 525~1605kHz LW 145~270kHz
POWER SOURCE	AC 220-240V ~ 50Hz 13W DC 9V --- SUM-1 ("D" SIZE CELL) X 6
FTZ Prüf. Nr. 11/632	
TOSHIBA CORPORATION	
MADE IN JAPAN 25808509	



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2. DISASSEMBLY INSTRUCTIONS

FRONT CABINET REMOVAL

1. Remove the Tuning Knob (A).
2. Open the cassette lid by pressing the Eject/Stop Button.
3. Unscrew five screws (B).
4. Separate the Front Cabinet from the Back Cabinet.
5. Reassemble in the reverse order.

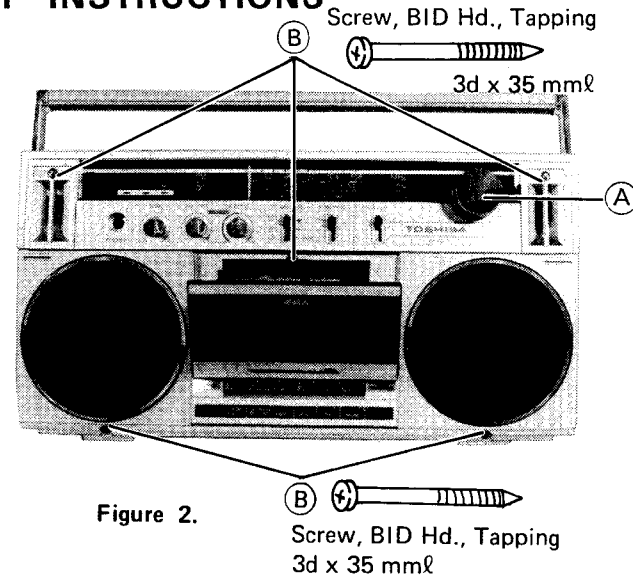


Figure 2.

EACH ASSEMBLY PART REMOVAL

1. Follow the instructions for Front Cabinet Removal.
2. Each assembly part has no retaining screws, therefore it can be separated from the Back Cabinet.
3. Reassembly in the reverse order.

3. HANDLE REMOVAL

When replacing the handle, remove it by cutting the handle washer shown in figure below with cutter etc.

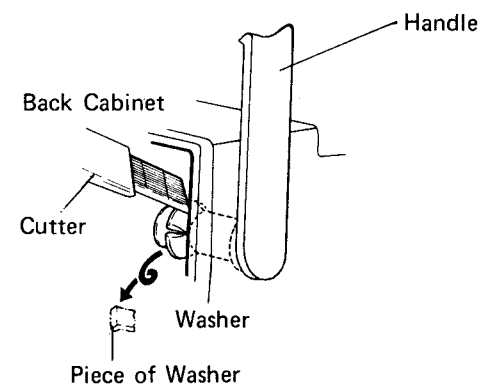


Figure 3.

4. METHOD OF P.R.C. REPAIRING

Cut defective printed-circuit resistor off with knife. See Figure 4. Solder a replacement resistor (See replacement resistor parts list) on the opposite side of printed-circuit board. See Figure 5.

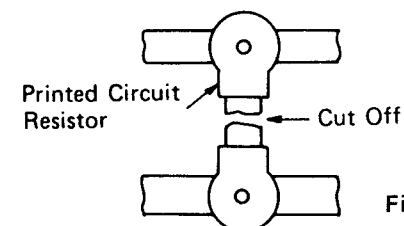


Figure 4.

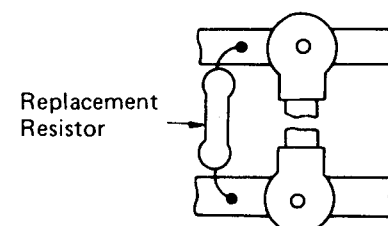
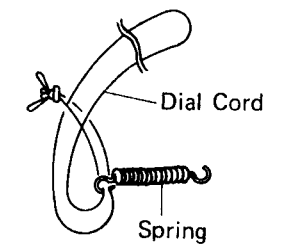


Figure 5.

5. DIAL CORD RESTRINGING

DIAL CORD RESTRINGING

1. Mount the dial drum onto the variable capacitor with screws.
2. Pass the dial cord through the drum with the drum turning fully clockwise.
3. Wind the cord in numerical order from 1 to 7.
4. Hook the spring to the drum.
5. Turn the drum fully counterclockwise so that the pointer touches the stopper of the frame.



Dial Cord Connection

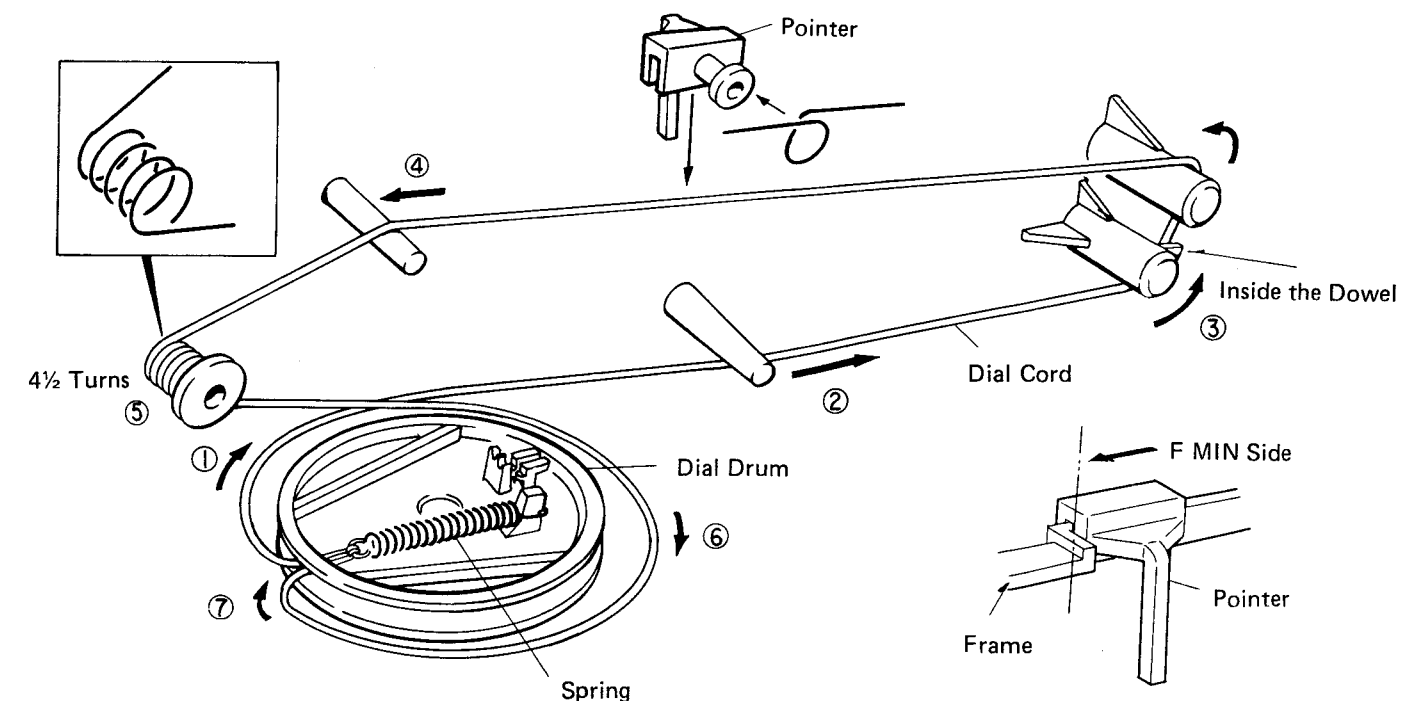
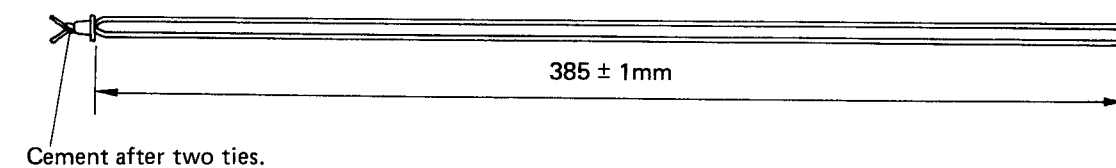


Figure 6.

6. ALIGNMENT INSTRUCTIONS

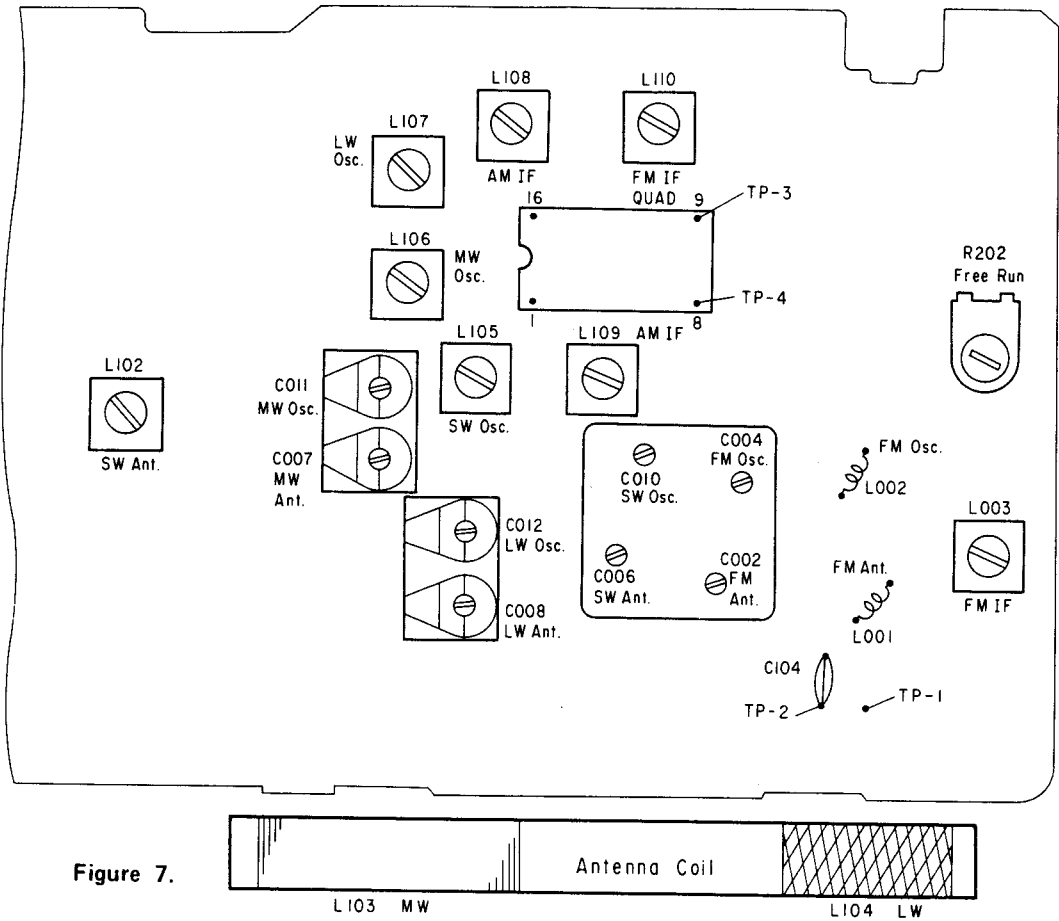


Figure 7.

TEST EQUIPMENT

- 1. Signal generator with a frequency range of at least from 140 kHz to 1670 kHz AM.
- 2. Oscilloscope with a side range amplifier of approximately 100 kHz.
- 3. Test loop — a coil of any size wire, one turn or more. (LW & MW)
- 4. A 30 ohm dummy antenna. (SW)
- 5. VTVM

AM ALIGNMENT

- 1. Turn on the AM signal generator and the VTVM allowing a fifteen-minute warm-up period.
- 2. Using the test loop across the output of the signal generator, inductively connect the signal generator to the radio.
- 3. Connect the VTVM across the voice coil or a 3.2 ohm dummy load.
- 4. Set signal generator frequency as listed in ALIGNMENT CHART and maintain a sufficient output level to provide an indication on VTVM.
- 5. Set volume control at mid-position.
- 6. Proceed as outlined in the IF-LW, MW and SW ALIGNMENT CHART.

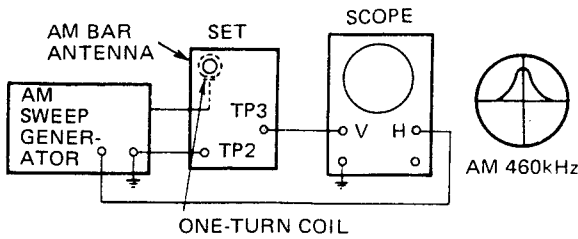


Figure 8.

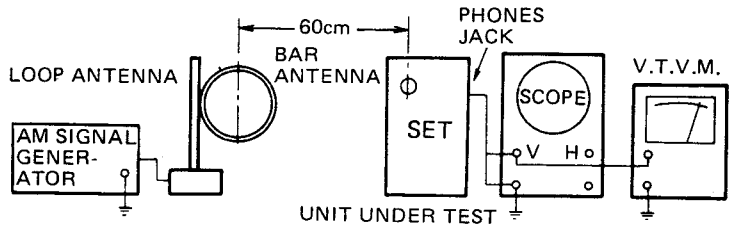


Figure 9.

MW ALIGNMENT CHART

Band	Step	Signal Generator Frequency	Radio Dial Setting	Adjustment	Remarks
IF	1	460 kHz	Tuning Gang Fully Counter-clockwise (Lowest Frequency)	L108, L109	Adjust for maximum indication.
	2	510 kHz	Tuning Gang Fully Counter-clockwise (Lowest Frequency)	OSC. Coil L106 (MW)	Adjust for maximum indication.
MW	3	1650 kHz	Tuning Gang Fully clockwise (Highest Frequency)	OSC. Trim. C011	Adjust for maximum indication.
	4	Repeat steps 2 and 3 as required.			
	5	600 kHz	Tune to Signal.	Ant. Coil L103 (MW)	Adjust for maximum indication.
	6	1400 kHz	Tune to Signal.	Ant. Trim. C007	Adjust for maximum indication.
	7	Repeat steps 5 and 6 as required.			

LW ALIGNMENT CHART

Band	Step	Signal Generator Frequency	Radio Dial Setting	Adjustment	Remarks
LW	1	142 kHz	Tuning Gang Fully Counter-clockwise (Lowest Frequency)	OSC. Coil L107	Adjust for maximum indication.
	2	280 kHz	Tuning Gang Fully Clockwise (Highest Frequency)	OSC. Trim. C012	Adjust for maximum indication.
	3	Repeat steps 1 and 2 as required.			
	4	142 kHz	Tune to Signal.	Ant. Coil L104	Adjust for maximum indication.
	5	280 kHz	Tune to Signal.	Ant. Trim. C008	Adjust for maximum indication.
	6	Repeat steps 4 and 5 as required.			

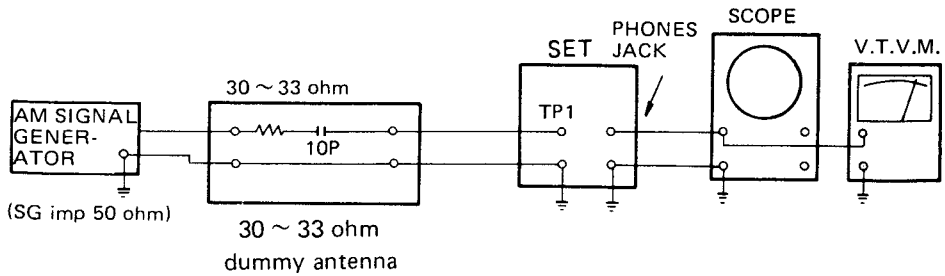


Figure 10.

SW ALIGNMENT CHART

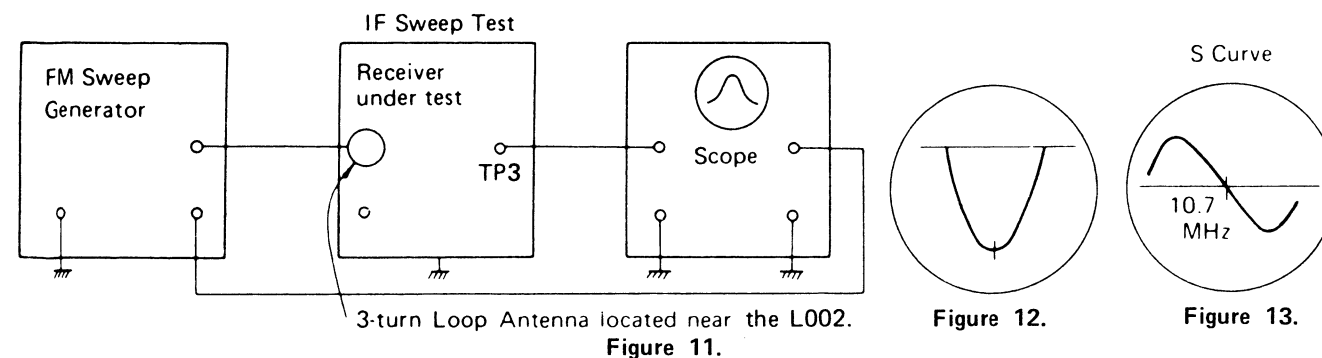
Band	Step	Signal Generator Frequency	Radio Dial Setting	Adjustment	Remarks
SW	1	5.75 MHz	Tuning Gang Fully Counter-clockwise (Lowest Frequency)	OSC. Coil L105	Adjust for maximum indication.
	2	16 MHz	Tuning Gang Fully Clockwise (Highest Frequency)	OSC. Trim. C010	Adjust for maximum indication.
	3	Repeat steps 1 and 2 as required.			
	4	6.5 MHz	Tune to Signal.	Ant. Coil L102	Adjust for maximum indication.
	5	14 MHz	No Adjustment	Ant. Trim. C006	Adjust for maximum indication.
	6	Repeat steps 4 and 5 as required.			

FM-IF ALIGNMENT

- Set the select switch to FM position.
- Turn on both sweep generator and oscilloscope, and allow a fifteen-minute warm-up period.
- Connect the RF SWEEP SIGNAL OUTPUT from the signal generator through the loop antenna to the receiver.
- Connect the oscilloscope vertical input directly to the test point TURN OUT H and connect the shielded lead to the test point E or chassis ground.
- Connect the SWEEP VOLTAGE OUTPUT of the sweep generator to the oscilloscope.
- Proceed as outlined in the FM-IF ALIGNMENT CHART.

FM-IF ALIGNMENT CHART

Step	Signal coupling	Equip.	Tuning	Connection	Adjust. point	Pattern
1	Connect sweep generator output to a three-turn loop antenna of 10cm diameter.	Sweep generator of 10.7 MHz center freq. with 10.7 MHz marker.	Tuning Knob fully counter-clockwise (Lowest Frequency.)	Set scope for connecting output signal from TUN OUT to vertical axis of scope "V" and sweep generator output to horizontal axis "H".	L003 L110	Turn the IF Transformer L110 fully counterclockwise to obtain a single peak. Adjust coil L003 in order until the best single peak is obtained. Figure 12. Finally turn the coil L110 to obtain S curve. See Figure 13.



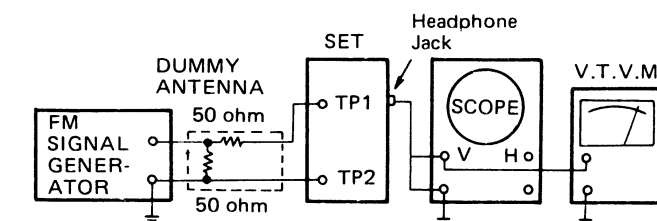
FM-RF ALIGNMENT

- Turn on the signal generator and the VTVM, and allow a fifteen-minute warm-up period.
- Connect the signal generator output through a 75 ohm dummy antenna across FM ANT.
- Connect the VTVM across the voice coil or a 3.2 ohm dummy load.
- Set the volume control to mid-position.

- Adjust the signal generator frequency as indicated in FM-RF ALIGNMENT CHART, and maintain a sufficient signal output level to provide a measurable indication.
- Proceed as outlined in the FM-RF ALIGNMENT CHART.

FM-RF ALIGNMENT CHART

Step	Signal Generator	Radio Dial Setting	Adjustment	Remarks
1	87.5 MHz	Tuning Knob fully Counterclockwise (Lowest Frequency)	OSC. Coil L002	Adjust for maximum output indication.
2	108 MHz	Tuning Knob fully Clockwise (Highest Frequency)	OSC. Trim. C004	Adjust for maximum output indication.
3	Repeat steps 1 and 2 as required.			
4	90 MHz	Tune to signal	Ant. Coil L001	Adjust for maximum output indication.
5	106 MHz		Ant. Trim. C002	
6	Repeat steps 4 and 5 as required.			

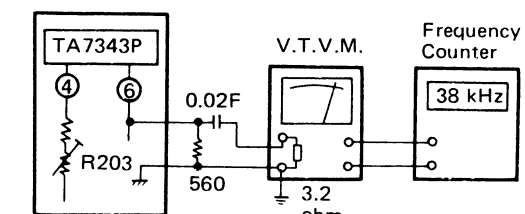


FREE RUN FREQUENCY ALIGNMENT

Adjust R202 under no signal condition so as to obtain 38 kHz ± 75 Hz.

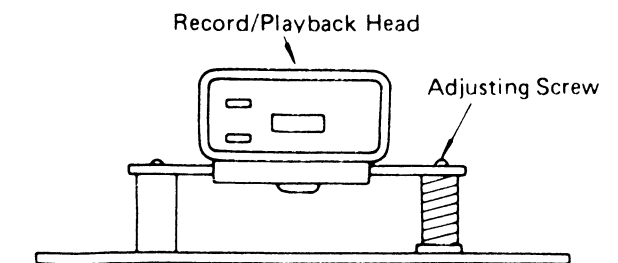
CAUTION:

When realigning the FM Receiving Frequency, the highest end of the frequency range should not be move than 108 MHz and the lowest end of the frequency range should not be less than 87.5 MHz, in order to comply with FTZ regulations in West Germany.



RECORD/PLAYBACK HEAD ADJUSTMENT

A 6.3 kHz test tape must be used for this adjustment. Connect a VTVM or an oscilloscope to the headphones jack or speaker terminal and adjust the azimuth by using a phillips screwdriver to maintain the maximum output voltage.



TAKE-UP/SUPPLY REEL TENSION

- Insert cassette torque meter (HARTAK X-87 Torquette).
- Press PLAY button and read torque meter. Torque should be 30 to 60 gcm.
- Release PLAY button and press REWIND button. Torque should be 75 to 135 gcm. If necessary, clean take-up reel or drive belt with alcohol, or replace belt.

7. ELECTRICAL PARTS LOCATIONS

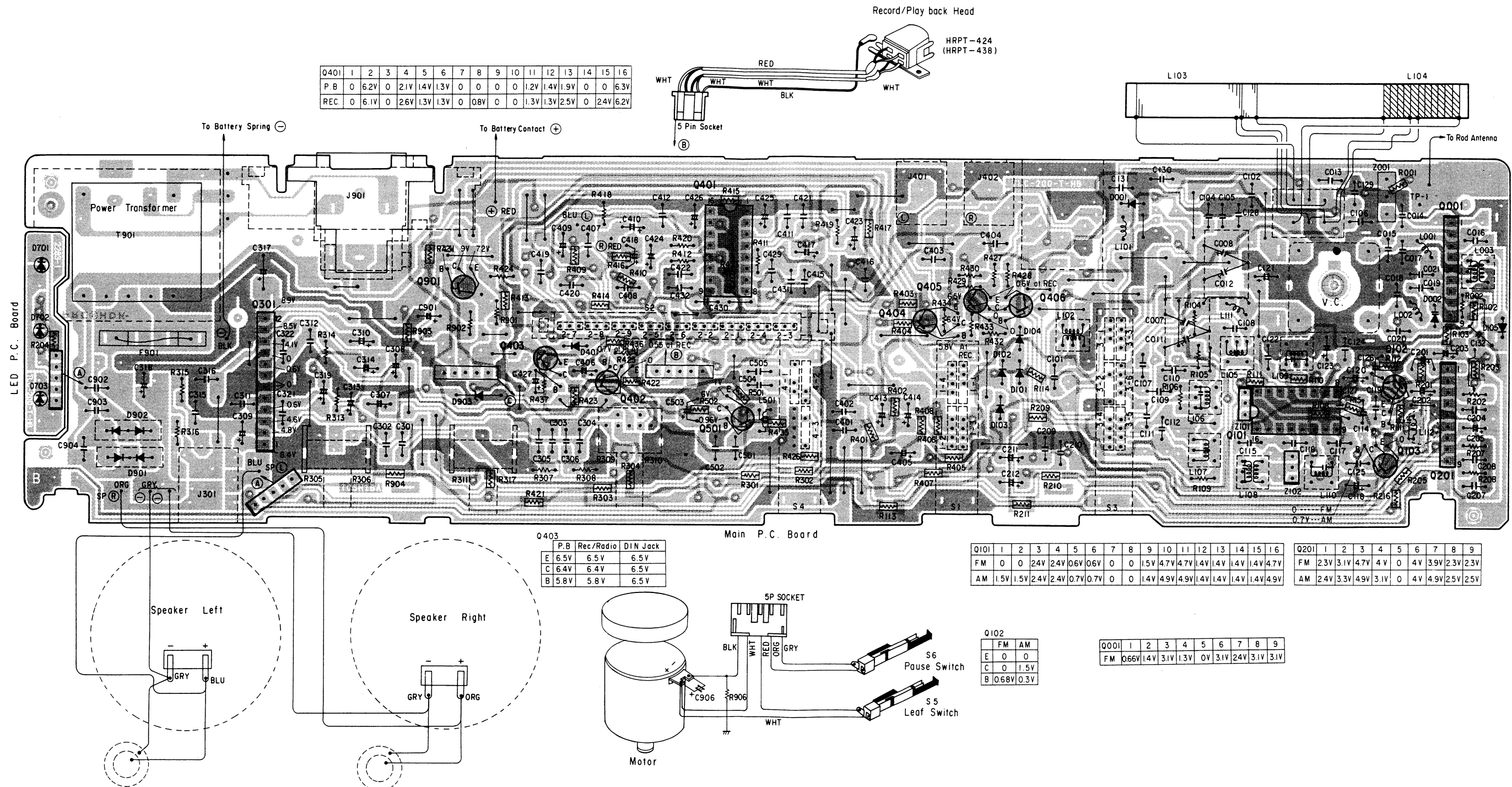
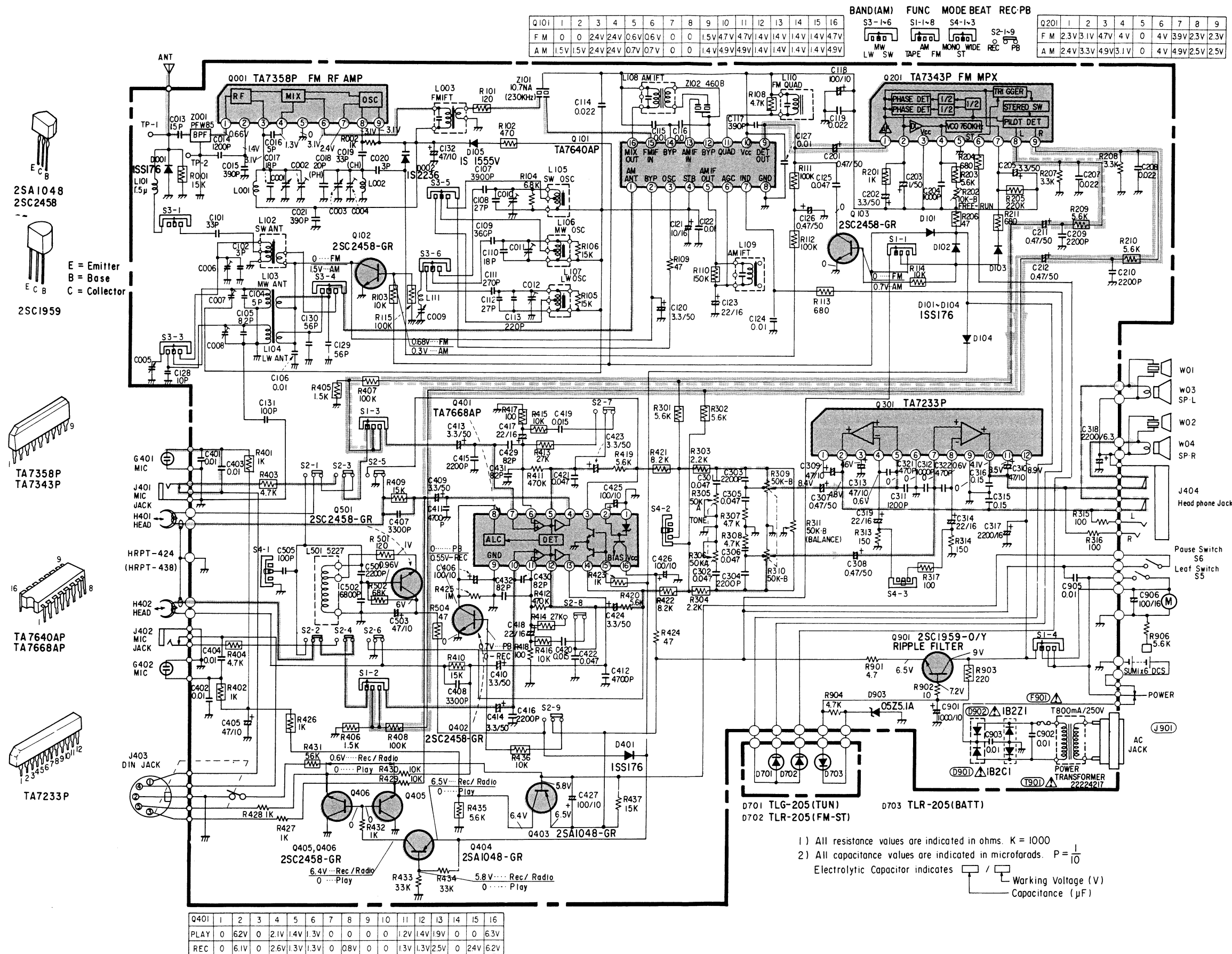


Figure 17.

8. SCHEMATIC DIAGRAM



9-1. MECHANISM EXPLODED VIEW (UPPER)

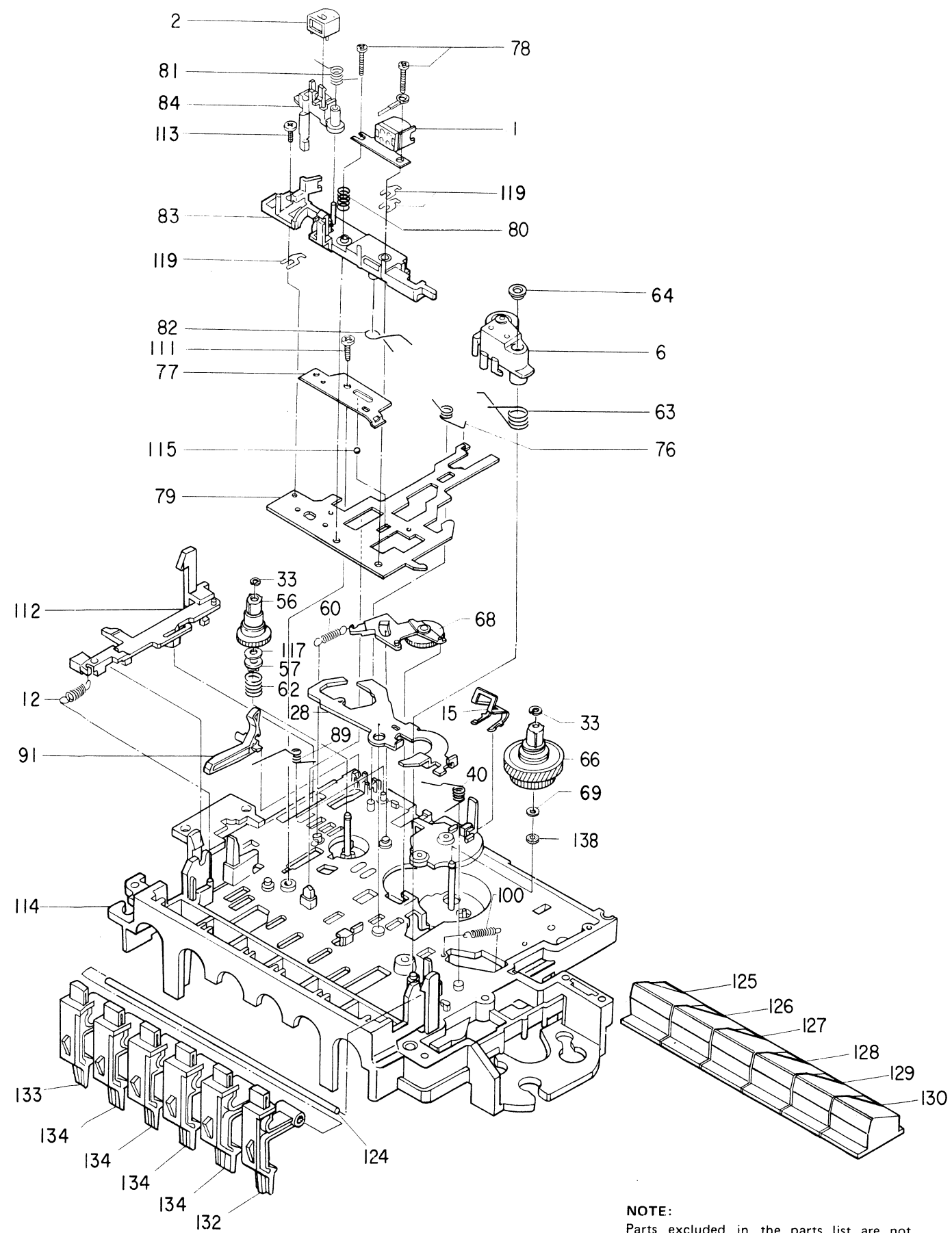


Figure 19.

NOTE:
Parts excluded in the parts list are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

9-2. MECHANISM EXPLODED VIEW (LOWER)

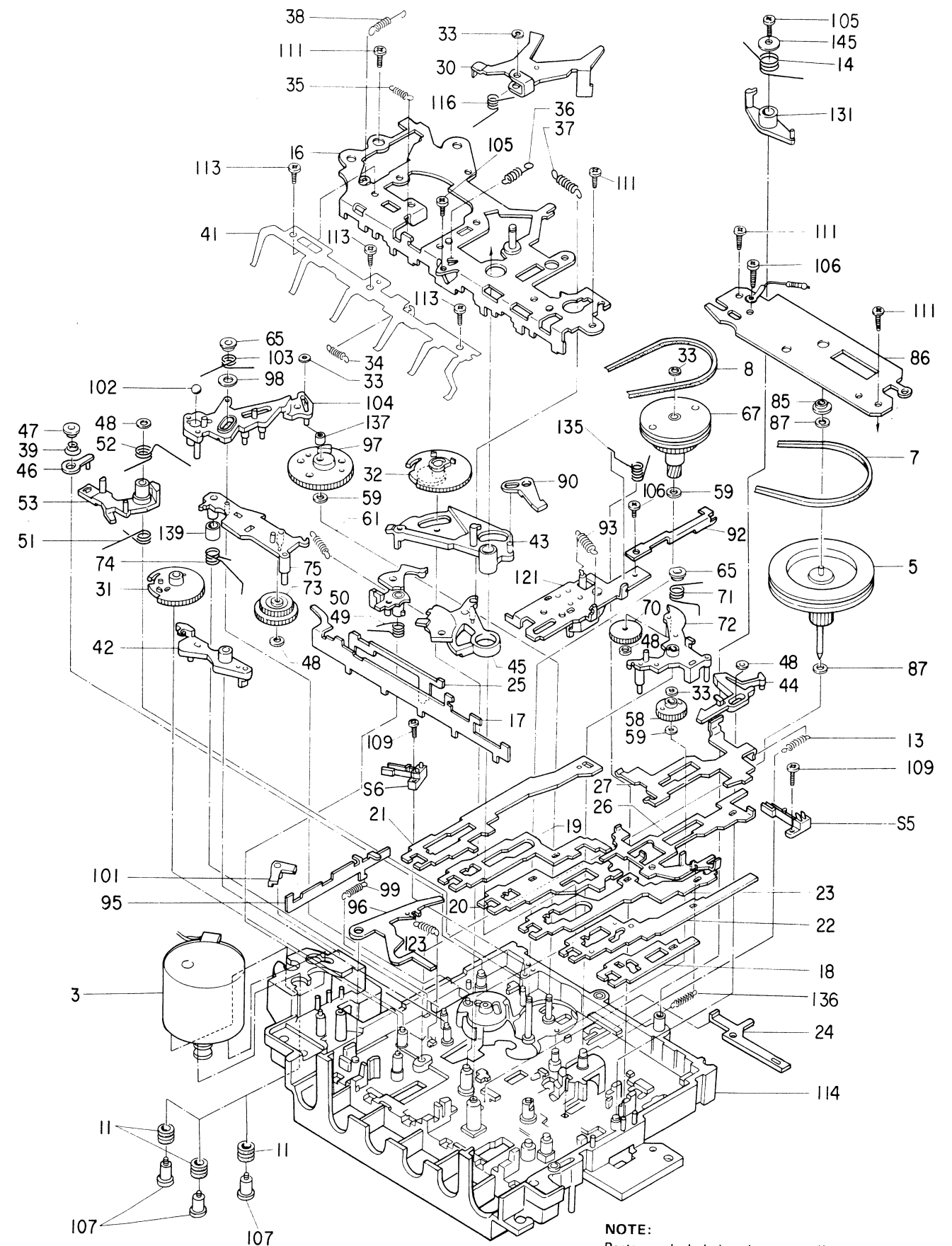


Figure 20.

NOTE:
Parts excluded in the parts list are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

10. CABINET EXPLODED VIEW

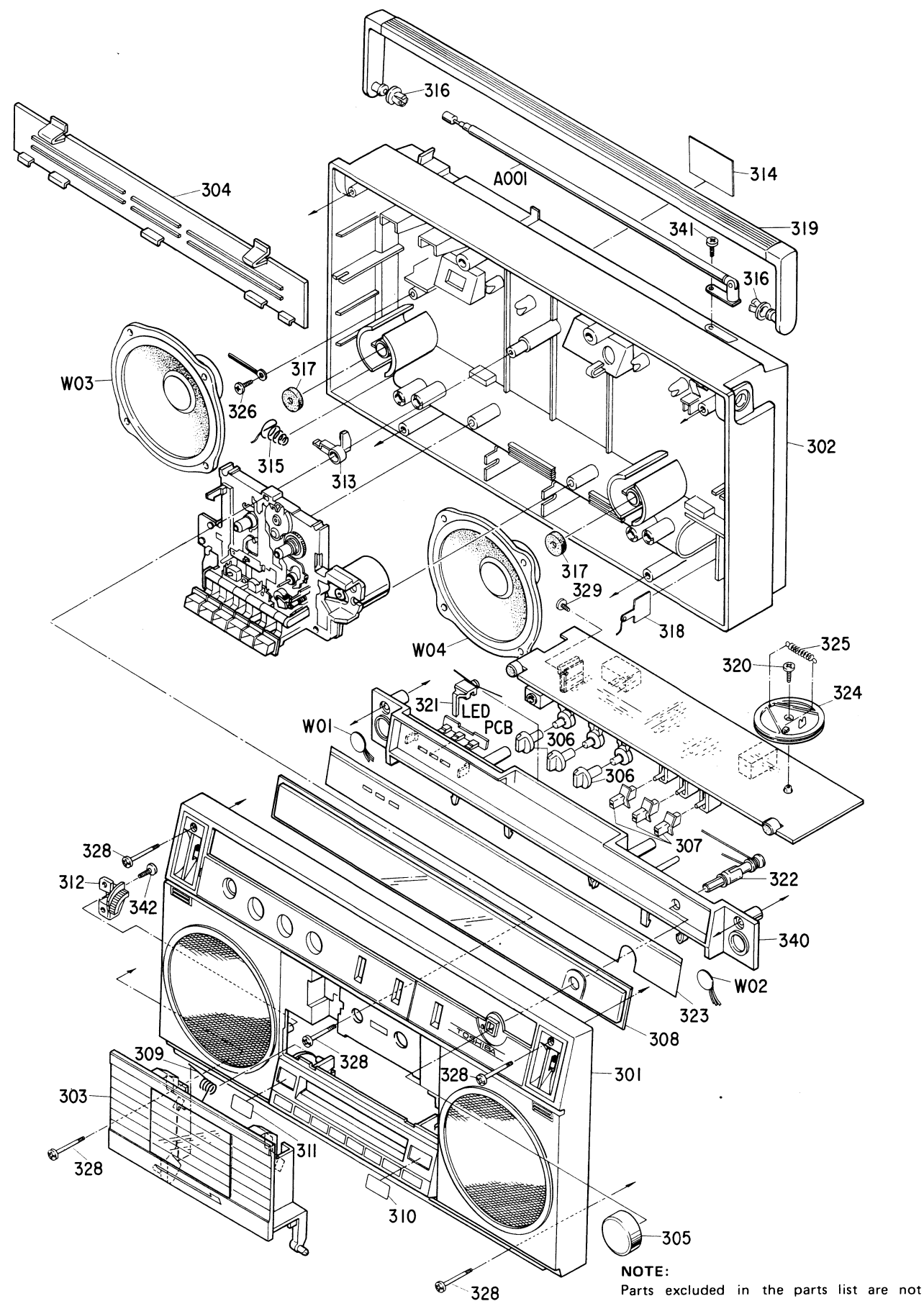


Figure 21.

12. PARTS LIST

CAUTION: The  mark, the symbol No. circled with oval in the schematic diagram and the shaded area in the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list.

Symbol No.	Part No.	Description
CABINET PARTS		
301	25881872	Front Cabinet Ass'y
302	25881930	Back Cabinet Ass'y
303	25881802	Cassette Cover Ass'y
304	25882293	Battery Cover
305	25837987	Knob, Tuning
306	25837988	Knob, Volume
307	25837989	Knob, Lever Switch
308	25882230	Dial Cover
309	25778110	Spring, Cassette
310	25808470	Decoration, Front, Right
311	25808471	Decoration, Front, Left
312	25844231	Damper
313	25784082	Lever, REC
314	25808509	Nameplate
315	22771355	Spring
316	25835493	Washer, Handle
317	25857092	Speaker Cushion
318	25864166	Contact Battery
319	25815241	Grip Ass'y
320	22707473	Screw, BID ϕ 2.6 x 6mm
321	22741394	Cursor
322	22743309	Tuning Shaft
323	25882259	Dial Plate
324	22742308	Drum
325	25776387	Drum Spring
326	22707826	Screw, DTBID ϕ 3 x 10mm
328	22708006	Screw, ϕ 3 x 35mm
329	22707910	Screw, DTBID ϕ 3 x 6mm
MECHANICAL PARTS		
1	22217424	Head, Record/Playback (HRPT-424)
2	22218240	Head, Erase (HET-58)
3	25791656	Motor Ass'y
5	25717575	Flywheel Ass'y
6	25717533	Pinch Lever Ass'y
7	25755548	Belt, Main
8	25755549	Belt, Center
11	25761327	Cushion, Motor
12	25776484	Spring
13	25776628	Spring
14	25778122	Spring, Record
15	25779298	Spring, Holder
18	25741943	Operative Plate, Stop

Symbol No.	Part No.	Description
19	25741944	Operative Plate, FF
20	25749020	Operative Plate, Play
21	25741946	Operative Plate, Pause
22	25741998	Operative Plate, Record
23	25741948	Operative Plate, REW
28	25748919	Lever, Cue
30	25748927	Lever, Release
31	25756374	Gear, Cam, Pause
32	25756373	Gear, Cam, Play
33	25766050	Washer
34	25776488	Spring
35	25776489	Spring
36	25776589	Spring
37	25776494	Spring
38	25776521	Spring
39	25777182	Spring, Pause Lock
40	25778040	Spring, Cue Lever
41	25779278	Spring, Operative Plate
42	25782546	Lever, Drive Pause
43	25782549	Lever, Drive Play
44	25782552	Lever, Select
45	25784085	Lever, Gear Lock, Play
46	25782560	Lever, Pause Lock
47	25783211	Bush
48	25783239	Bushing
49	25778048	Spring, Pause Gear Lock Lever
50	25782554	Lever, Gear Lock, Pause
51	25778047	Spring, ASO Pause Lever
52	25778049	Spring, Cue Support
53	25782543	Lever, ASO Pause
56	25754425	Reel Plate, Supply
57	25754439	Spacer
58	25756375	Gear, REW
59	25766112	Washer
60	25776482	Spring
61	25776492	Spring
62	25777144	Spring
63	25778042	Spring, Pinch Lever
64	25783260	Bush, Black
65	25783226	Bush
66	25712423	Reel Plate, Take-up
67	25713561	Center Clutch Ass'y
68	25712428	Lever Ass'y, Take-up
69	25766042	Washer
70	25756304	Gear, REW
71	25778045	Spring, REW Lever
72	25784084	Lever, REW
73	25756306	Gear, FF
74	25778104	Spring, FF Lever
75	25782548	Lever, FF

Symbol No.	Part No.	Description
76	25778041	Spring, REC/PB Head
78	22707833	Screw, Special
80	25777137	Spring, Azimuth
81	25778038	Spring, Erase Head
82	25778043	Spring, Head
83	25781250	Mount, Head
84	25782558	Lever, Erase Head
85	25725340	Bearing
87	25766043	Washer
89	25778039	Spring, REC Lock Lever
90	25782545	Lever, REC
91	25782557	Lever, REC Lock
92	25749021	Slider Ass'y, Record
93	25776481	Spring
97	25756310	Gear, ASO
98	25766073	Washer
99	25776490	Spring
100	25776491	Spring
101	25782561	Lever, ASO Relate
102	25757130	Ball, Steel, Ø5
103	25778046	Spring, ASO Detect
104	25782550	Lever, ASO Detect
105	22707299	Screw, Tapping BIDØ2 x 8mm
106	22707350	Screw, DTBIDØ2.6 x 5mm
107	22707747	Screw, Special, Motor
109	22707870	Screw, Tapping, PANØ2 x 8mm
111	22707301	Screw, Tapping, BIDØ2.6 x 8mm
112	25784080	Slider, Eject
113	22707426	Screw, DTBIDØ2 x 5mm
114	25791612	Main Chassis Ass'y
115	25757129	Ball, Steel, Ø2
116	25778079	Spring, Release Lever
117	25764597	Washer
119	25735266	Spacer, Adjust
121	25791611	Slider, REC, B, Ass'y
123	25776526	Spring
125	25886003	Button, Stop
126	25886004	Button, REC
127	25886005	Button, REW
128	25886006	Button, Play
129	25886007	Button, FF
130	25886008	Button, Pause
131	25784081	Lever, REC, A
132	25784079	Lever, Operative Pause
133	25784078	Lever, Operative Stop
134	25784077	Lever, Operation
135	25778128	Spring, REC Slider
136	25776487	Spring
137	25726665	Spacer, ASO Gear
138	25764566	Washer
139	25726684	Spacer, FF Lever

Symbol No.	Part No.	Description
TRANSISTORS, ICS & DIODES		
Q001	B0325500	IC, TA7358P
Q101	B0356385	IC, TA7640AP
Q102, 103	A6332440	Transistor, 2SC2458-GR
Q201	B0325350	IC, TA7343P
Q301	B0319970	IC, TA7233P
Q401	B0356690	IC, TA7668AP
Q402	A6332440	Transistor, 2SC2458-GR
Q403, 404	A6534440	Transistor, 2SA1048-GR
Q405, 406	A6332440	Transistor, 2SC2458-GR
Q501	A6332440	Transistor, 2SC2458-GR
Q901	A6319300	Transistor, 2SC1959N-Y
D001	A7160570	Diode, 1SS176
D002	A7289000	Diode, 1S2236
D101, 102, 103, 104	A7160570	Diode, 1SS176
D105	A7246703	Diode, 1S1555V
D401	A7160570	Diode, 1SS176
D701	A8606630	Diode, TLG205 (TUN)
D702	A8603110	Diode, TLR205 (FM-ST)
D703	A8603110	Diode, TLR205 (BATT)
D901	A7682012	Diode, 1B2C1 (T)
D902	A7682052	Diode, 1B2Z1 (T)
D903	A7110023	Diode, 05Z5.1
TRANSFORMERS & COILS		
L001	22294003	Coil, Trap
L002	22294016	Coil, Trap
L003	22265821	Transformer, IF, FM
L101	22291188	Coil, Choke, 1.5µH
L102	22282240	Coil, SW ANT
L103, 104	22242949	Coil, MW/LW ANT
L105	22285321	Coil, SW OSC
L106	22245385	Coil, MW OSC
L107	22245389	Coil, LW OSC
L108	22264837	Transformer, IF, AM
L109	22264838	Transformer, IF, AM
L110	22265822	Transformer, IF, FM QUAD
L111	22235233	Coil, Trap
L501	22235227	Coil, OSC
T901	22224217	Transformer, Power
ELECTRICAL PARTS		
S1	22196295	Switch, Lever, FUNCTION
S2	22196233	Switch, Slide, REC/PB
S3	22196232	Switch, Lever, BAND SELECT
S4	22196295	Switch, Lever, MODE BEAT
S5	22196064	Switch, Leaf, MOTOR
S6	22196063	Switch, Leaf, PAUSE

Symbol No.	Part No.	Description
Z001	22153121	Filter, FM RF, PFWB5
Z101	22153249	Filter, Ceramic, 10.7MHz
Z102	22153083	Filter, Ceramic, 460 kHz
Z103	22241066	Coil, Trap
J401, 402	22198016	Jack, Microphone
J403	22167997	Jack, DIN, 5P
J404	22198015	Jack, Headphone
J901	22169031	Jack, AC, 2P
F901	22144387	Fuse, T800mA/250V
W01, 02	22152452	Speaker, SP-02P-2J
W03, 04	22152455	Speaker, SP-12S5H
EP01	22161731	Connector, 5P
EP02	22165047	Fuse Holder
A001	22124711	Rod Antenna
G401, 402	22154233	Microphone, Built-in
CAPACITORS		
Voltage Ratings of Ceramic, Plastic Film and Polypropylene Capacitor are 50V DC unless otherwise noted.		
D = ±0.5pF, J = ±5%, K = ±10%, M = ±20%, Z = +80-20%		
Abbreviations: CD = Ceramic Disk, PF = Plastic Film, EL = Electrolytic, PP = Polypropylene, BL = Barrier Layer		
C001, 002, 003, 004, 005, 009, 006, 010	22308235	Variable
C007, 011	22309183	Trimmer, MW Ant. & OSC.
C008, 012	22309184	Trimmer, LW Ant. & OSC.
C013	22361150	CD, 15pF, K
C014	22349122	CD, 1200pF, K
C015	22362391	CD, 390pF, K
C016	22361509	CD, 5pF, D
C017	22362180	CD, 18pF, K
C018	22360646	CD, 20pF
C019	22360136	CD, 33pF, J
C020	22361309	CD, 3pF, D
C021	22362391	CD, 390pF, K
C101	22362330	CD, 33pF, K
C102	22361309	CD, 3pF, D
C104	22361509	CD, 5pF, D
C105	22362820	CD, 82pF, K
C106	22342103	CD, 0.01mfd, Z
C107	22349392	CD, 3900pF, K
C108	22361270	CD, 27pF, J
C109	22321016	PF, 360pF, J
C110	22362180	CD, 18pF, K
C111	22321048	PP, 270pF, J
C112	22362270	CD, 27pF, K
C113	22321164	PP, 220pF, J
C114	22342223	CD, 0.022mfd, Z
C115	22342103	CD, 0.01mfd, Z
C116	22342103	CD, 0.01mfd, Z

Symbol No.	Part No.	Description
C117	22362391	CD, 390pF, K
C118	22483101	EL, 100mfd, 10V
C119	22349103	CD, 0.01mfd, K
C120	22488339	EL, 3.3mfd, 50V
C121	22485100	EL, 10mfd, 16V
C122	22349103	CD, 0.01mfd, K
C123	22485220	EL, 22mfd, 16V
C124	22342103	CD, 0.01mfd, Z
C125	22360331	BL, 0.047mfd, M, 25V
C126	22488478	EL, 0.47mfd, 50V
C127	22349103	CD, 0.01mfd, K
C128	22361100	CD, 10pF, D
C129	22362560	CD, 56pF, K
C130	22362560	CD, 56pF, K
C131	22362101	CD, 100pF, K
C132	22483470	EL, 47mfd, 10V
C201	22488478	EL, 0.47mfd, 50V
C202	22488339	EL, 3.3mfd, 50V
C203	22488109	EL, 1mfd, 50V
C204	22321057	PP, 1000pF, J
C205	22488339	EL, 3.3mfd, 50V
C207, 208	22360329	BL, 0.022mfd, M, 25V
C209, 210	22349222	CD, 2200pF, K
C211, 212	22488478	EL, 0.47mfd, 50V
C301, 302	22342473	CD, 0.047mfd, Z
C303, 304	22349222	CD, 2200pF, K
C305, 306	22360331	BL, 0.047mfd, M, 25V
C307, 308	22488478	EL, 0.47mfd, 50V
C309, 310	22483470	EL, 47mfd, 10V
C311	22349122	CD, 1200pF, K
C312	22349102	CD, 1000pF, K
C313	22483470	EL, 47mfd, 10V
C314	22485220	EL, 22mfd, 16V
C315, 316	22371154	PF, 0.15mfd, J
C317	22485222	EL, 2200mfd, 16V
C318	22482222	EL, 2200mfd, 6.3V
C319	22485220	EL, 22mfd, 16V
C321, 322	22349471	CD, 470pF, K
C401, 402	22342103	CD, 0.01mfd, Z
C403, 404	22360327	BL, 0.01mfd, M, 25V
C405	22483470	EL, 47mfd, 10V
C406	22483101	EL, 100mfd, 10V
C407, 408	22349332	CD, 3300pF, K
C409, 410	22488339	EL, 3.3mfd, 50V
C411, 412	22349472	CD, 4700pF, K
C413, 414	22488339	EL, 3.3mfd, 50V
C415, 416	22349222	CD, 2200pF, K
C417, 418	22485220	EL, 22mfd, 16V
C419, 420	22360328	BL, 0.015mfd, M, 25V
C421, 422	22360331	BL, 0.047mfd, M, 25V
C423, 424	22488339	EL, 3.3mfd, 50V
C425, 426, 427	22483101	EL, 100mfd, 10V

Symbol No.	Part No.	Description
C429, 430	22362820	CD, 82pF, K
C431, 432	22362820	CD, 82pF, K
C501	22371222	PF, 2200pF, J
C502	22371682	PF, 6800pF, J
C503	22483470	EL, 47mfd, 10V
C504	22371122	PF, 1200pF, J
C505	22321082	PP, 100pF, J
C901	22483102	EL, 1000mfd, 10V
C902	22342103	CD, 0.01mfd, Z
C903	22342103	CD, 0.01mfd, Z
C905	22342103	CD, 0.01mfd, Z
C906	22485101	EL, 100mfd, 16V
RESISTORS 1. Resistors are Carbon film ¼W, ±5%, unless otherwise noted. 2. PRC is short for printed resistor circuit. If replacement of the resistor in PRC is required, please use the substitutional fixed carbon film resistor of ¼W, ±5% according to the following list. K = 1000, M = 1000000		
R001	22545153	15K ohm (PRC)
R002	22584102	1K ohm, 1/6W
R101	22545121	120 ohm (PRC)
R102	22545471	470 ohm (PRC)
R103	22545103	10K ohm (PRC)
R104	22584682	6.8K ohm, 1/6W
R105	22584153	15K ohm, 1/6W
R106	22584153	15K ohm, 1/6W
R108	22545472	4.7K ohm (PRC)
R109	22584470	47 ohm, 1/6W
R110	22545154	150K ohm (PRC)
R111	22545104	100K ohm (PRC)
R112	22545104	100K ohm (PRC)
R113	22545681	680 ohm (PRC)
R114	22545103	10K ohm (PRC)
R201	22545102	1K ohm (PRC)
R202	22658599	Semi-fixed Variable 10K ohm-B, Free Run
R203	22545562	5.6K ohm (PRC)
R204	22545681	680 ohm (PRC)
R205	22545224	220K ohm (PRC)
R206	22545470	47 ohm (PRC)
R207, 208	22584332	3.3K ohm, 1/6W
R209, 210	22545562	5.6K ohm (PRC)
R211	22545681	680 ohm (PRC)
R301, 302	22545562	5.6K ohm (PRC)
R303, 304	22545222	2.2K ohm (PRC)
R305/306	22651583	Variable, 50K ohm-A, Tone
R307, 308	22584472	4.7K ohm, 1/6W
R309/310	22651585	Variable, 50K ohm-B, Volume
R311	22651582	Variable, 50K ohm-B, Balance

Symbol No.	Part No.	Description
R313, 314	22584151	150 ohm, 1/6W
R315, 316	22584101	100 ohm, 1/6W
R317	22545101	100 ohm (PRC)
R401, 402	22545102	1K ohm (PRC)
R403, 404	22545472	4.7K ohm (PRC)
R405, 406	22545152	1.5K ohm (PRC)
R407, 408	22545104	100K ohm (PRC)
R409, 410	22545153	15K ohm (PRC)
R411, 412	22584474	470K ohm, 1/6W
R413, 414	22545273	27K ohm (PRC)
R415, 416	22545103	10K ohm (PRC)
R417	22545101	100 ohm (PRC)
R418	22584101	100 ohm, 1/6W
R419, 420	22584562	5.6K ohm, 1/6W
R421, 422	22545822	8.2K ohm (PRC)
R423	22545102	1K ohm (PRC)
R424	22584470	47 ohm, 1/6W
R425	22584105	1M ohm, 1/6W
R426	22545102	1K ohm (PRC)
R427, 428	22584102	1K ohm
R429, 430	22584103	10K ohm
R431	22545563	56K ohm, (PRC)
R432	22584102	1K ohm
R433, 434	22584333	33K ohm
R435	22545562	5.6K ohm (PRC)
R436	22545103	10K ohm (PRC)
R437	22543153	15K ohm
R501	22545121	120 ohm (PRC)
R502	22545683	68K ohm (PRC)
R504	22545470	47 ohm (PRC)
R901	22584479	4.7 ohm, 1/6W
R902	22584100	10 ohm, 1/6W
R903	22545221	220 ohm (PRC)
R904	22545472	4.7K ohm (PRC)
R906	22545562	5.6K ohm, 1/4W
ACCESSORIES		
AC01	22903581	Owner's Manual (TE)
AC01	22903582	Owner's Manual (TU)
AC02	22176616	Cord, Power (TE)
AC02	22176626	Cord, Power (TU)
AC03	22900308	Label, Mark, SEV (TE)
AC04	22900074	Label, BEAB (TU)
AC05	22900160	Label, Mark (TE)